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DEMOGRAPHIC, SOCIAL AND ENVIRONMENT STATISTICS: CIVIL REGISTRATION AND VITAL STATISTICS

Progress report on civil registration and vital statistics

Report of the Secretary-General

SUMMARY

This report presents a review of the developments in civil registration and vital statistics since the twenty-first session of the Statistical Commission. First, activities carried out at the global level are discussed, followed by activities implemented at the regional level (paras. 2-20). Secondly, the report focuses on advances and issues in the improvement of national civil registration and vital statistics systems, including related advances in data processing technology and dissemination (paras. 21-33) and discusses the uses of vital records and vital statistics (paras. 34-44). The report also summarizes the types of technical co-operation activities rendered to countries, upon request, in the past 10 years, the progress made, problems encountered and future needs (paras. 45-55). Finally, a short description of the new International Programme for Accelerating the Improvement of Vital Statistics and Civil Registration Systems, which features a new approach in technical co-operation, is presented (paras. 56-63). Points for discussion by the Commission are included (para. 64).

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INTRODUCTION

1. At its twenty-first session, in 1981, the Commission considered a progress report on civil registration and vital statistics systems. The demand for current demographic statistics has, since then, substantially increased, particularly at sub-national and community levels. As a result, there is increased interest in civil registration and vital statistics by Governments, international organizations and non-governmental organizations. Moreover, the subject has not been considered by the Commission since 1981. Accordingly, the present report was prepared, as requested, by the Working Group on International Statistical Programmes and Co-ordination of the Commission at its thirteenth session, held in Geneva from 11 to 24 September 1989. The report deals with the progress made in civil registration and vital statistics at the global, regional and country levels and summarizes important advances made. Issues relating to further improvement of civil registration and vital statistics systems are also discussed, including the types of technical co-operation activities and support provided by the United Nations to member States. Also, with regard to future technical co-operation activities, a short description of and progress report on the newly initiated International Programme for Accelerating the Improvement of Vital Statistics and Civil Registration Systems in Developing Countries is provided.

I. ACTIVITIES SINCE THE TWENTY-FIRST SESSION OF THE STATISTICAL COMMISSION

A. Global level

1. Revision of the Handbook of Vital Statistics Systems and Methods

2. As part of the contining work of the United Nations in implementing the World Programme for the Improvement of Vital Statistics, adopted by the Economic and Social Council in resolution 1307 (XLIV) of 31 May 1968, the Statistical Office has completed the revision of the Handbook of Vital Statistics Systems and Methods. The Handbook has two volumes. Volume I was completed and submitted for publication in early 1990, 1/ and volume II was published in 1984. 2/ The revised Handbook takes into account developments in national practices and methods in recent years and provides suggestions and guidance to countries in their efforts to implement the international recommendations on vital statistics systems published by the United Nations, 3/ which remain fully valid and widely used. The current Handbook supersedes the Handbook of Vital Statistics Methods, published by the United Nations in 1955. 4/

2. A study on approaches in population censuses to collecting information for estimating vital rates

3. In connection with the preparation of the Population and Housing Census Handbook, the Statistical Office of the United Nations Secretariat has reviewed some 370 population and housing censuses carried out between 1964 and 1985 in order

to examine various approaches that were employed in the collection of statistics on fertility and mortality. Part II of the Handbook presents the results of this study, including questions asked on fertility and mortality, the kinds of data collected by countries in their population censuses and the way the data were tabulated. The Handbook is expected to be completed and submitted for publication in late 1990 or early 1991.

3. Compilation and dissemination of vital statistics

4. The Statistical Office of the United Nations Secretariat has continued the compilation and dissemination of vital statistics through its annual publication of the United Nations Demographic Yearbook. Eight new editions of the Demographic Yearbook have been published since the twenty-first session of the Statistical Commission. In each issue, birth, death, marriage and divorce statistics for the latest available years are published for every reporting country or area. Further, the 1982 issue included marriage and divorce statistics as a special topic. The 1985 issue treated mortality as a special topic, and the 1986 issue featured fertility as a special topic.

5. From the completed questionnaires used in compiling the Demographic Yearbook, it emerges that 102 out of 205 countries or areas (50 per cent) consider their birth registration to be complete, and 95 countries or areas (46 per cent) have reported complete death registration. 5/ The remaining countries either indicated that they consider their birth and death registration less than 90 per cent complete or provided no information at all. Marriage, divorce and foetal death statistics have different degrees of coverage. There has been some improvement in registration completeness in a number of countries during the past four decades, since the beginning of the United Nations work in the field of international demographic statistics compilation. For instance, in 1950, only 52 and 53 countries or areas out of 144 reported complete birth and death registration, respectively. However, the quality of vital statistics obtained from civil registration systems in many countries is still not satisfactory, and it is particularly weak in data relating to causes of death. Despite the limited overall progress achieved over the decades, in recent years a combination of factors has resulted in improvements in the functioning of civil registration systems in several developing countries. 6/

B. Regional level

1. Europe

6. The countries of Europe have for a long time had good civil registration and vital statistics systems and have produced quite reliable and timely vital statistics. Intensive use of vital records and statistics has been made by the Governments and the societies at large in many ways. Further, civil registration functions have, during the past decade, become increasingly computer-based, with data processing equipment becoming more efficient and cost-effective, especially with the advent of micro computers.

7. In a number of countries, civil registration and vital statistics systems are linked to population registers or are a part of them. For example, Denmark, Finland, the Netherlands, Norway and Sweden have maintained population registers. There has generally been a trend towards centralized administration of the registers.

2. Asia and the Pacific

8. The Economic and Social Commission for Asia and the Pacific (ESCAP) has taken an active interest in the improvement of civil registration and vital statistics in the region. Expert advisory services have been provided to countries in the past 10 years. In 1985, with financial support from the United Nations Population Fund (UNFPA), the Statistics Division of ESCAP organized two regional seminars on this subject. The Pacific Seminar on Civil Registration and Vital Statistics was held in Apia, Samoa, from 30 April to 6 May 1985 and was attended by representatives from 15 countries. The Asian Seminar on Civil Registration and Vital Statistics was held in Bangkok, Thailand from 10 to 16 December 1985 and was attended by participants from 18 countries. These seminars discussed the status of the civil registration services, reviewed the progress made since 1968 when the first seminar for the region was held (Copenhagen), and identified a number of practical approaches and strategies to further improve civil registration and vital statistics systems. The proceedings of the seminars were brought out by ESCAP in 1987 in the publication Status of Civil Registration and Vital Statistics in Asia and the Pacific.

9. Further, ESCAP collaborated with the International Institute for Vital Registration and Statistics (IIVRS) in organizing an IIVRS Committee in Asia for the promotion of civil registration and vital statistics systems in Asian countries. The Committee's report, Urgently Needed Reforms in Civil Registration in Asian Countries, 7/ was published in 1986 and sent to the ministries concerned in 16 Asian countries.

3. Latin America and the Caribbean

10. Two international workshops on civil registration and vital statistics have been conducted in this region. The first was held in Grenada from 13 to 15 October 1987, to address the problems facing the civil registration and vital statistics systems in the Caribbean countries. It was jointly sponsored by the Economic Commission for Latin America and the Caribbean (ECLAC) and the Pan American Health Organization (PAHO). The 12 Caribbean countries that attended the meeting had formulated a plan of action, including necessary follow-up activities, for further development of civil registration and vital statistics in the region. The second workshop, on civil registration and vital statistics for health services planning, was held in Tobago from 6 to 9 June 1989. Thirty-six participants from 13 English-speaking Caribbean countries and international and non-governmental organizations attended the workshop. The workshop was organized by the Caribbean Community Secretariat in collaboration with PAHO.

11. The Inter-American Children's Institute, which is an affiliate of the Organization of the American States (OAS) and located in Montevideo, Uruguay, has sponsored civil registration activities in the region to promote the recording of vital events. A regional project on civil registration was implemented in the early 1980s to improve registration and vital statistics in the region with financial assistance from UNFPA. An important contribution of this project was the publication of Diagnosis of Civil Registration in Latin America, 8/ which included the results of a survey conducted in 18 countries. The Institute also organized subregional training courses for senior civil registration staff of the region.

4. Africa

12. The civil registration and vital statistics systems in most countries of the region are in an early stage of development and are in great need of both technical and financial support. In some countries, the system does not cover all groups of the population and all areas of the country, and require substantial improvement in coverage. However, a few countries or areas do have virtually complete birth and/or death registration and statistics. They are Algeria (births), Cape Verde, Egypt, Libyan Arab Jamahiriya (births), Mauritius, Sao Tome and Principe, Seychelles and Tunisia (births). Another 16 African countries have initiated a programme aimed at improving their civil registration and vital statistics systems during the 1980s. They are Benin, Botswana, Burundi, Congo, Gabon, Kenya, Morocco, Niger, Nigeria, Senegal, Sierra Leone, Somalia, Sudan, Swaziland and the United Republic of Tanzania.

13. The Economic Commission for Africa (ECA) held a meeting of the Working Group on the Development of Civil Registration Systems and Vital Statistics Collection in Africa, with the financial support of UNFPA, in Addis Ababa, Ethiopia, from 21 to 26 October 1986.

5. Western Asia

14. Eleven of the 12 Western Asian countries (all except Oman) have in operation civil registration systems that comprise the registration of live births, deaths, foetal deaths, marriages and divorces. Emphasis is placed on the registration of births and deaths.

15. In the majority of the countries the responsibility for the compilation of national vital statistics is vested in the central statistical office. However the civil registration functions are the responsibility of other ministries or departments. In Iraq, Jordan, Saudi Arabia and the Syrian Arab Republic, the civil registration and vital statistics functions are carried out in the same ministry or department. Yemen and the Syrian Arab Republic had implemented reforms in their civil registration and vital statistics systems with assistance from the United Nations. In 1984 Kuwait established a computerized civil information system that includes registration of vital events and changes in place of residence. A personal identification number has been designed to link the records of an individual. In 1989, the Department of Primary Health Care in Qatar started to

computerize the registration of live births. Almost every country in the region attaches great importance to population registers and population identification for the purpose of providing services, a linkage that can lead to significant improvements in civil registration.

16. A meeting organized by the International Institute for Vital Registration and Statistics with financial support from UNFPA was convened in Cairo, Egypt, from 22 to 23 November 1989 to consider, inter alia, the setting-up and membership of a Committee of experts to promote the improvement of the civil registration and vital statistics systems in the countries of Western Asia and Northern Africa. The meeting discussed the outline of a report to be prepared to sensitize high-level governmental authorities on the subject in order to gain their support for the establishment or the improvement of national systems.

C. Work of non-governmental organizations

17. The International Institute for Vital Registration and Statistics has worked vigorously since 1974 to stimulate, support and complement the efforts of international organizations, national Governments, and individual professionals working to improve vital registration and statistics systems in various countries. The Institute receives financial support from the United Nations Population Fund. Its major goal is to provide an international professional forum for the exchange of administrative and technical information and also of the experience gained by countries in civil registration and vital statistics endeavours. The members of the Institute are top decision-making officials responsible for one aspect or another of their country's civil registration and vital statistics systems. During the 1980s the number of national members grew from 175 (from 104 countries) to 368 (from 157 countries).

18. During the 1980s the Institute established three expert committees - one for Asia, one for Latin America, and one for Western Asia - to assess the status of civil registration and vital statistics in the respective regions. The committees made many recommendations for further action for the attention of senior officials in the national Governments of the regions. The Institute also maintained a roster of experts in civil registration and vital statistics, conducted a survey to determine the professional interests of civil registration and vital statistics professionals, and carried out several studies related to civil registration and vital statistics practices in various countries. It publishes a newsletter, The Chronicle, as well as a technical paper series.

19. A number of other non-governmental institutions, such as the International Statistical Institute and the International Union for the Scientific Study of the Population, have a general interest in civil registration and vital statistics matters and have made contributions toward their improvement.

II. ISSUES AND ADVANCES IN THE IMPROVEMENT OF CIVIL REGISTRATION AND VITAL STATISTICS SYSTEMS

A. Issues in improving civil registration and vital statistics systems

20. Two major approaches have characterized developing country efforts directed at improving civil registration and vital statistics over the past two decades. The first approach involved the use of demonstration area projects and the second, the use of sample registration schemes of one sort or another.

21. Demonstration area projects were based on the idea that an endeavor as large as the improvement of a national civil registration system would not be successful unless it proceeded on the basis of a well-tested and phased approach. Over the past 10-15 years this strategy of concentration on the use of demonstration areas has guided most international support for the improvement of civil registration systems. Unfortunately, whatever its theoretical soundness, this strategy appears in practice to have actually hampered the improvement of national civil registration systems in many developing countries.

22. The demonstration area approach suffers from three principal drawbacks. First, by focusing registration activities in pilot or demonstration areas, it often leads to the development of methods and arrangements in the pilot areas which have little possibility for extension to the country at large, once external support ends. Secondly, once the pilot projects end, countries have to deal with two systems of registration and two systems of vital statistics: the national systems operating in the areas not included in the project, and the new systems implemented in the demonstration areas. Although the experimental activities sometimes contributed in important ways to upgrading the technical, management and operational aspects of the civil registration system and to raising awareness among the concerned staff and the public at large, the compilation of vital statistics for the country as a whole became somehow more difficult than before the project started. This was mainly because the Governments were not able to institutionalize the experimental systems country-wide, because many changes introduced in the content and design of the registration and vital statistics forms in the demonstration areas could not be introduced into the reporting forms used in the remainder of the country. Finally, the emphasis on demonstration projects meant that many countries that were ready and able to move beyond pilot projects to major systemic improvements in their national civil registration and vital statistics systems were cut off from even modest external support for those more fundamental and far-reaching improvements.

23. Another strategy employed in a number of developing countries, often with international assistance, was the use of sample registration schemes to generate much needed vital rates and basic estimates of fertility and mortality. Sample registration systems usually involve some procedure for actively canvassing and recording vital events on a continuous basis in national probability samples. Often the sample registration schemes are based on a dual-records-system approach of one sort or another. Dual systems provide for two methods of obtaining information about vital events (for example, continuous canvassing for events and a

retrospective household survey) and case-by-case matching of reported events. The results of the matching procedure are then used either to correct the results of one of the reporting systems or to provide estimates of vital rates adjusted for estimated omissions. However, the continuous recording of births and deaths under most sample registration systems is performed by an operation separate from the official vital registration system. As such, it has no impact on the official civil registration system which, over the years, is largely left unaffected in terms of coverage, quality and timeliness.

24. In India, for example, a sample registration scheme has been carried out for about three decades, from the early 1960s when it was introduced in a few States. 9/ By now, it has been extended to almost the whole country and the sample size enlarged so as to be able to produce data at major administrative area levels. At present, the system produces the required vital rates, the population growth rate and other fertility and mortality measures for the country, States and other major divisions on a continuous basis. However, the official vital registration in the States is far below the desired levels, since India has made no significant parallel efforts to improve its civil registration and vital statistics systems, which would have served both statistical, legal and administrative purposes. Bangladesh (since 1980), Pakistan (1962- 1965, 1985 and onwards) have also adopted sample registration systems to provide vital rates and other demographic measures on a continuous basis. Other countries have established dual records systems to test the completeness of the national civil registration system or to provide estimates of vital rates and other demographic indicators for a period of time. Among the latter were Liberia (1969, 1971), Nepal (1977-1981), the Philippines (1970, 1971), Sri Lanka (1981), Thailand (1964-1965, 1984-1986) and Turkey (1965, 1966, 1967). 10/

25. The periodic surveys, which are a component of many dual records systems, can be usefully adopted for evaluating the completeness of the official civil registration system in countries where the latter is satisfactory but improvements in coverage are still possible. No matter what alternative methods systems are used by countries to generate vital rates and other basic demographic parameters, they cannot replace a well functioning civil registration system in terms of providing data needed for small geographical areas on a timely basis.

B. Advances in technology and automation of basic functions of vital registration and statistics systems

26. With computers that have become simpler to operate and less expensive to install, and especially with the use of microcomputers in all parts of the world, civil registration systems in many countries are functioning better. For example, countries are turning to computer-based civil registration facilities to enhance and speed up their services to the public. Portable and easy-to-use software for data entry, editing and data tabulation can further expedite those activities. Priority functions such as keying the entire vital record, editing, retrieving, correcting, amending, preparing alphabetical indexes and issuing certificates are some ways in which modern technology can assist in a very efficient way. 11/ The automation of registration activities also permits (with the protection necessary

to ensure confidentiality) more intensive use of the data by other official agencies which make extensive use of vital records - e.g., statistical offices, population registers, population identification services, electoral rolls and the like. Thus, if proper co-ordination is made with the appropriate agencies of the country, the same data-base could serve many legal, administrative and statistical purposes, thus saving time and money. Furthermore, the storage and the safety of vital records are enhanced substantially, and their retrieval becomes easier as vital records can be located in a matter of a few seconds, compared to the lengthy manual process.

27. Many countries have witnessed increasing demands on the registration system for services and have responded by resorting to automated systems. The extent to which such systems have been developed varies from country to country, depending on the requirements of the particular country and on the availability of trained staff and equipment. Resorting to computer facilities to manage civil registration-related services has also been a natural consequence of the ever growing quantity of vital records that have to be handled on a continuous and permanent basis. Computer-based registration functions can be installed at both the local registration offices and at the regional and the central registration agency, depending on the availability of funds and skilled human resources to operate and maintain the equipment. The central registration agency, whether a national or a state office, can prepare central alphabetical indexes of vital records to assist in searching the records for certification purposes and to avoid duplication of registration. The entire system can be better monitored and administered. A number of countries in Asia and the Pacific, Africa and North and South America have already taken steps towards computerization of some priority registration functions. West Asian countries are moving towards computerization in their population registers, which include vital registration. The systems in Japan, Kuwait and Thailand are fully computerized now. The systems in Canada, England and Wales, the Northern European countries, and most parts of the United States of America include automation of vital registration.

28. A number of countries are opting for decentralized coding and data-capture to produce vital statistics, mainly with the assistance of microcomputers at stations in certain regions of the country. Other more advanced systems require data entry to be made at the source (local registration office) and transmitted directly either electronically over telephone lines or on floppy disks to the central agency. Editing of the vital records is also done at those levels. This procedure provides accurate and more timely data. It also eliminates the need for centralized staff for coding and data entry, the large office space to store the records, and the movement of vital records. The elimination of record handling overcomes a major obstacle - namely, the document-flow problems which in a number of countries hinders timely compilation and reduce the completeness of vital statistics.

29. Data-capture can also be done by scanners or optical disk systems for record storage, retrieval, and the printing of copies of vital records. This technology produces a high quality image that does not suffer from deterioration, as is the case of paper documents and microfilm. A high-resolution scanner is used electronically to capture record images, which are stored on optical disks. A

computerized indexing system provides for automated searching of the documents, with the amount of data entry for the index directly related to the number of variables needed for record identification.

30. The optical disk system provides a permanent storage medium for documents. It requires very little physical space, maintains excellent reproduction quality, and, when integrated with a computerized index, offers document retrieval at electronic speed. The system is also able to enter statistical information at the time of indexing, which results in the generation of vital statistics along with the processing of routine registration activities. In this way, a fast, cost-effective and efficient processing system for meeting the registration demands of the public and providing a capability for preparing relevant vital statistics can be implemented. The growing use of micro-computer-based optical disk systems in various situations makes them financially feasible. Optical disks provide an exact copy of the original document and use the full capabilities of the computer to locate, link and process the documents.

31. Other countries (Chile, Denmark, Kuwait, Netherlands and Sweden) have opted for a complete computerized registration programme in which the complete vital record data, including names and other descriptive particulars, are keyed and stored in mainframe computer systems. This approach has a significant data-entry cost associated with it, as has been documented in several states of the United States of America. 12/

32. Some registration systems have resorted to computer-assisted microfilming. Vital records are stored on microfilm and can be easily retrieved and duplicated with the assistance of computers. An exact copy of the original record can be produced. However, this procedure does not allow vital statistics data to be generated and requires separate data-entry and data-processing operations.

33. Although computerization of the vital registration-related functions is not yet wide-spread in developing countries, it clearly offers great promise for them. Microcomputers can assist vital registration functions because the computer memory, storage and processing speeds are large enough to compete favorably with those in mainframe computers. Regardless of the technique adopted, whether computer-based, computer-assisted microfilming, a combination of both, under the law of each country the originals of vital records have to be preserved either indefinitely or for long periods. For convenience, they may be kept in a distinct office. A combination of microfilming and computer-based systems may even better suit the countries' needs. Further, countries may have to consider modifications in their civil registration and vital statistics laws to ensure that the computer or microfilm records are legally acceptable backups of the original records.

C. Uses of vital records and vital statistics

34. Civil registration systems serve as a continuous source of statistics on live births, deaths, foetal and infant deaths, marriages, divorces etc. Thus, they enable local and national officials and the public to monitor natural growth and changes in fertility and mortality. They also provide certificates on registered

vital events occurring to individuals and thereof to meet legal and administrative requirements of a country.

35. The live birth, foetal death and infant death records provide the basis for public health programmes for post-natal care of mother and child, for programmes of vaccination and immunization, for assistance to the physically handicapped, and so forth. Because records include the causes of death, they are useful for epidemiological purposes as indicators of the existence of infectious diseases requiring immediate control measures, as well as for the identification of health problems. Vital registers may also be used in public safety, accident prevention and crime prevention programmes, in social security, military service and electoral rolls.

36. Marriage records may be used administratively as proof of establishment of a family or household and hence to initiate family-benefit programmes related to health, housing, etc. They also serve to clear administrative files on programmes dependent on marital status, alimony payments, etc. Divorce records serve similar administrative purposes.

37. Other important uses of continuous vital statistics derived from civil registration records lie in planning for economic and social development. The two components of natural growth of the population, births and deaths, determine the trend and rate of population growth at the national and sub-national levels. Estimates of population size as well as population projections can be made on the basis mainly of reliable vital statistics and therefore, population estimates and projections - e.g., school enrolment, child-bearing women, the elderly population etc. - will provide a useful basis for social and economic development planning and policies, their periodic evaluation and monitoring.

38. The rapid growth of the population in many countries became a matter of serious concern in the post-war period and gave rise to organized national programmes of family planning. For effective implementation of these programmes, annual fertility statistics classified by various social and demographic characteristics and by detailed geographical divisions are needed for understanding the situation and thereafter for planning, administration as well as evaluation of the programmes.

39. The earliest uses of vital statistics have been in the field of health to delineate major public health problems, to design health programmes and to evaluate health progress. Statistics on causes of death have been particularly useful in identifying the diseases of public health importance, and following the course of mortality associated with these diseases, and the characteristics of persons dying from these diseases are particularly useful in planning, conducting and evaluating control or prevention programmes.

40. The commitment by member States of WHO to achieve health for all by the year 2000 has given rise to further efforts aimed at the reduction of inequalities. Further, a number of population groups have been identified for special attention, among them women and children, the disabled, the elderly, migrants and refugees, minority groups and others. Thus, the need for data to

support the analyses of health situations extends not only to local area needs but to the needs of various population groups.

41. Of particular importance in relation to women's health is the problem of maternal mortality, an area in which WHO, UNFPA and UNICEF have been intensifying their efforts. The exact magnitude of the maternal mortality problems is unknown, as in many developing countries the cause of death are either not stated or stated by lay persons. Nonetheless, it has been estimated that worldwide at least 500,000 women die each year from causes related to pregnancy and childbirth.

42. Child health is a problem of special importance in the developing countries. Deaths among children under five years have been estimated to account for about one-half of all deaths occurring in many developing countries. The exact proportions at both national and local levels are unknown owing to the problem of large omissions in the civil registration system of deaths occurring at an early age. Much can be done to improve the recording of deaths and their causes in the civil registration system.

43. To meet the data needs of these specific concerns and their focus on special population groups, complete, accurate and current vital statistics at the national and small geographical area level are essential. Civil registration is the only means of providing flow statistics at the required geographical levels and the main one to produce statistics on maternal mortality and characteristics of the child and its mother, so that more in depth studies on child and infant mortality can be made. Awareness of maternal, infant and child mortality has increased everywhere, including the least developing countries. Much of the child mortality is preventable by means of currently available tools and measures.

44. In the WHO Strategy of Health for All by the Year 2000, a number of minimum health goals have been established in terms of indices like average life expectancy at birth, infant mortality rate, and childhood death rate which require accurate death, birth and population statistics. Therefore, to plan, monitor and evaluate health strategies ranging from disease prevention and control and health promotion, reliable vital statistics are indispensable tools for the country as a whole as well as for its administrative subdivisions. This is of particular importance in the local areas where special population and health service programmes are being implemented. Under the emerging new directions of population and health service programmes, countries are facing an increasing need for vital statistics.

III. TECHNICAL CO-OPERATION ACTIVITIES AND FUTURE NEEDS

45. Technical co-operation activities of the United Nations for the improvement of national civil registration and vital statistics systems have been carried out through provision of advisory and consultant services, support for the acquisition of equipment, training of national officials engaged in civil registration and vital statistics activities. These activities were mostly funded by the United Nations Population Fund (UNFPA) and executed by the Department of Technical Co-operation for Development (United Nations/Secretariat) with substantive support provided by the Statistical Office (United Nations Secretariat). A brief account of these activities is given below.

A. Support for country projects

46. Between 1980 and 1989, 25 developing countries received United Nations technical and financial assistance for improving their civil registration and vital statistics systems. Sixteen countries are in Africa, seven in Asia and two in South America. The amount of funds allocated by UNFPA for all projects totalled $6.78 million, including $3.24 million for advisory services, mission and personnel costs, $0.93 million for training activities, $1.95 million for purchasing of data processing, microfilming, office equipment and vehicles and $0.65 million for preparation and publication of technical and methodological materials and others. Support was also given for local personnel costs in a limited number of civil registration projects to ensure a good start of the projects but were gradually passed on to the governments as the projects progressed.

47. Some projects were initiated to assist the Governments in preparing the legal framework and regulations for the establishment of a permanent and continuous civil registration system. Other projects helped the countries either to create an office of civil registration to oversee related activities or to strengthen the existing one. There are also projects to assist countries to redesign, test and verify the registration and statistics reporting procedures. Although the technical assistance provided by the projects was very useful for building up the required infrastructure for running the systems nationwide, the operation and maintenance of the systems usually slowed down considerably or even stopped after the external support to projects came to an end.

48. A pattern, common to all those projects, has been the adoption of the demonstration area approach. Following this approach, a few areas of the country were chosen and improved procedures for civil registration and vital statistics reporting were instituted. The successful results of this approach are expected to be followed by other areas of the country gradually. While the projects carried out at the demonstration areas were funded by international resources, the expansion was to be carried out mostly on Government's own support, both technically and financially. However, this has not happened, except in a very few countries.

49. An important component of the technical co-operation activities has been the advisory and consultant services. These services were rendered either by United Nations headquarters technical advisors, the United Nations regional commissions' regional advisors and experts and advisors associated with specific country projects. Their services included project formulation, systems' assessment, project monitoring and evaluation, project implementation, training, data processing, and so on.

50. At the regional level, the Economic Commission for Latin America and the Caribbean (ECLAC) has not assigned a full time adviser to work on civil registration and vital statistics. The Economic and Social Commission for Asia and the Pacific (ESCAP) had a full-time adviser on civil registration and vital statistics until 1982. In March 1985, a new regional adviser on population statistics was recruited whose duties included work in civil registration and vital statistics. In the Economic Commission for Africa (ECA), the functions of the two

regional advisers covered work in civil registration and vital statistics. The regional adviser in demographic statistics in the Economic and Social Commission for Western Asia (ESCWA) also covered the work in civil registration and vital statistics. The United Nations Headquarters also had only one technical adviser devoted full time to the work of civil registration and vital statistics.

51. Despite the limited resources that are available for advisory services on a full-time basis, other advisers in demographic statistics have also been assigned to undertake missions to countries to assist in the improvement of their civil registration and vital statistics systems.

B. Training activities

52. Another key component of technical co-operation activities was training of governmental officials engaged in civil registration and vital statistics to enhance their professional and technical capabilities. Training activities were provided through fellowships, study tours, in-service training and training workshops. These have been provided either under national projects funded by UNFPA or under the regular budget of the Department of Technical Co-operation for Development.

53. During the 1980s, a total of 38 governmental officials were granted United Nations fellowships for studies abroad. Another 52 officials at the managerial and supervisory levels from 16 countries participated in short-term study tours to neighboring countries to learn about their civil registration and vital statistics systems or about ongoing projects related to the improvement of the systems.

54. Short-term in-service training through country projects have been provided to middle and low-level personnel working in the offices responsible for the civil registration and the vital statistics work. The trainees comprised local registration personnel, assistant registrars, local health workers including midwives, nurses, birth attendants, village elders, community and local area authorities, and so on. A notable and successful example of this type of training was that conducted in Kenya under the demonstration project from 1981 to 1984. A total of 4,118 district registrars, assistant registrars and health personnel had been trained. Similar activities were undertaken in Paraguay in 1987, where 53 officials were trained, and in Yemen in 1988-1989, where 170 officials were trained.

55. A special training workshop in civil registration and vital statistics was organized by the Department for Technical Co-operation for Development and the Statistical Office in Kenya, from 30 October to 8 December 1989. The workshop was designed to train a group of civil registration and vital statistics officials for three weeks. In the fourth and fifth weeks of the workshop, the participants were asked to train another group of officials and in the last week of the training, were asked to evaluate the training results. The first group was attended by 23 participants - 10 from Kenya, five from Swaziland, two each from Botswana, Ethiopia, Zambia and Somalia. The second group was attended by about 130 governmental officials from Kenya. This workshop was considered quite successful.

C. International Programme for Accelerating the Improvement of Vital Statistics and Civil Registration Systems

56. The Statistical Commission, at its twenty-fifth session in 1989, expressed its support for a new initiative towards accelerating the improvement of civil registration and vital statistics systems of the developing countries developed jointly by the Statistical Office, the United Nations Population Fund (UNFPA), the World Health Organization (WHO) and the International Institute for Vital Registration and Statistics. This initiative was embodied in the International Programme for Accelerating the Improvement of Vital Statistics and Civil Registration Systems, which is designed to encourage countries in taking necessary measures to remove the constraints and solve the problems that impede the development of their national systems. The Programme envisages that countries themselves will take the lead and carry out the necessary reforms to improve their systems, while the international community and organizations will provide guidance and technical impetus. The Programme endeavours to mobilize support from organizations of the United Nations system as well as from bilateral agencies and private organizations and undertake co-ordination with a view to securing maximal use of financial and technical resources for the strengthening and the improvement of national civil registration and vital statistics systems.

57. The Programme is designed to assist countries by:

(a) Providing guidelines for the self-assessment of both the existing country systems and ways of improving the system;

(b) Providing guidance for formulating a national plan of action;

(c) Disseminating and assisting in the preparation of handbooks and technical documents for use in the country system;

(d) Operating a clearing house of information on vital statistics and civil registration systems which will be responsive to needs of countries;

(e) Providing technical advice to countries at various stages of country project development;

(f) Supporting and carrying out training activities to increase the skills of nationals;

(g) Assisting countries in obtaining other necessary technical co-operation for proposed activities and projects and related support of national organizations.

58. The programme shifts the emphasis of international technical co-operation away from pilot studies and demonstration area approaches to solving specific problems existing in the current vital statistics and civil registration systems of the country. It is hoped that the various international, bilateral and private agencies will make changes in their guidelines on assistance so as to suit the new direction given by the Programme. The role of the Programme is to step up its

support for projects aimed at improving the vital statistics and civil registration systems and to provide limited technical guidance on doing so. It is envisaged that there will be broad support for the country projects from the various multilateral and bilateral agencies as well as from the country itself. A pre-requisite to country participation in the Programme will be a positive commitment to invest staff, time and resources by the country. The commitment, in the first phase of the Programme, will be the willingness of the Government to prepare the assessment of the current systems in accordance with a suggested outline, by developing a plan of action and by showing intent to implement necessary reforms. Because this requires the allocation of necessary funds, political support at the highest governmental level will be needed.

59. Another feature of the Programme is that it will take into account the present stage of development of the vital statistics and civil registration systems in a country so that specific problems prioritized for action can be pinpointed. The goal-setting, the short, medium- and long-term objectives, and the type of technical assistance, will be assessed accordingly, to suit the needs of each participating country. It is again stressed that a requirement for participation in the Programme will be a strong national willingness to invest time and resources in it.

60. For programme purposes, developing countries have been grouped into three categories:

(a) Countries which have the best prospect for a rapid attainment of complete birth and death registration - say, in a period of five years. These countries at present have 80 per cent or higher registration coverage of births and deaths;

(b) Countries which have a good prospect for a rapid attainment of complete birth and death registration - say, in a period of 10 years;

(c) Countries with poorer prospects for a rapid attainment of complete birth and death registration.

61. For the first group, technical and financial assistance, channeled through the Programme, will lead towards the consolidation of a comprehensive civil registration system from which complete and accurate vital statistics can be derived on a permanent basis. For the second group of countries, the objective is towards reaching complete coverage and production on a regular basis of reliable vital statistics. For the third group, the objective is to help countries establish solid technical and legal bases and to outline the necessary infrastructure for universal registration and vital statistics compilation.

62. The Statistical Office, in collaboration with the Department of Technical Co-operation for Development, is acting as the focal point in promoting the strategy for accelerating developments in these systems. It will be substantively responsible for the implementation, co-ordination and monitoring of the programme activities. Further, it is being joined by the United Nations Population Fund, the World Health Organization and the International Institute for Vital Registration and Statistics - the co-sponsoring institutions - which will be closely involved in

the planning and carrying out of the programme activities. Furthermore, the regional commissions are also being associated in promoting the programme activities in their respective regions.

63. The Programme will be carried out in phases, with the first phase being planned for 1991-1993. UNFPA has allocated funds ($280,000) for the training component of this phase. UNICEF has also indicated its intention to lend support. Two workshops are to be organized in the second and third quarters of 1991, one for countries in the Caribbean, and another for countries in Central and South America. Other workshops are planned in 1992 and 1993 for countries in Asia and Africa, respectively. To implement fully the proposed activities, additional resources are clearly needed, and the participation of multilateral and bilateral donor agencies and interested organizations and institutions is being sought.

IV. POINTS FOR DISCUSSION

64. The commission may wish to:

(a) Review the progress made by developing countries in civil registration and vital statistics during the past years and consider further work including forms of technical co-operation activities needed for rapid improvement of the systems; and

(b) Comment upon and make suggestions for the implementation of the International Programme for Accelerating the Improvement of Vital Statistics and Civil Registration Systems.

Notes

1/ United Nations publication, Sales No. E.1990.XVII.

2/ United Nations publication, Sales No. E.84.XVII.11.

3/ United Nations publication, Sales No. E.73.XVII.9.

4/ United Nations publication, Sales No. 1955.XVII.1.

5/ Data estimated to be virtually complete - i.e., representing at least 90 per cent of the events occuring each year.

6/ See United Nations Economic and Social Commission for Asia and the Pacific, "Status of civil registration and vital statistics in Asia and the Pacific, (ST/ESCAP/465) (Bangkok, 1987).

7/ International Institute for Vital Registration and Statistics. Urgently Needed Reforms in Civil Registration in Asian Countries: A Report for the Consideration of the Governments of the Region (Bethesda, Maryland, IIVRS) (October 1986).

Notes (continued)

8/ United Nations Population Fund and Interamerican Children's Institute, "Diagnostico del Registro Civil Latinoamericano". Proyecto FNUAP-IIN, RLA/78/P14 (April 1982).

9/ United Nations Economic and Social Commission for Asia and the Pacific, op. cit., pp. 73-94.

10/ United Nations Economic and Social Commission for Asia and the Pacific, op. cit., pp. 73, 181, 211, 244, 279; Robert Meyers, "The dual record system: an overview of experience in five countries"; Laboratories for Population Statistics. Scientific Report Series No. 26 (Chapel Hill, University of North Carolina, April 1976); Tito Mijares, "Development and maintenance of a sample vital registration system in the Philippines". Laboratories for Population Statistics, Scientific Report Series No. 19 (Chapel Hill, University of North Carolina, November 1977); Joan Lingner, and Bradley Wells, "Organization and methods of the dual record system in India". Laboratories for Population Statistics, Scientific Report Series No. 9 (Chapel Hill, University of North Carolina, October 1973).

11/ Vito Logrillo, Automation of Vital Registration Systems in the United States, Technical Papers, No. 40 (Bethesda, Maryland, International Institute for Vital Registration and Statistics, April 1990).

12/ Ibid.

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SOCIAL STATISTICS AND INDICATORS

Report on progress made in the development of a co-ordinated United Nations system data base for selected social statistics and indicators of common interest and the development of related national data bases

Report by the Secretary-General

SUMMARY

This report has been prepared in response to the request of the Statistical Commission and its Working Group at their last sessions for a report on progress of work in development of co-ordinated and integrated data bases of key social statistics and indicators at international and national levels. It focuses mainly on developments and experience in monitoring the achievement of social goals and objectives and related human development concerns set out in recent international mandates in the fields of children, population and health.

Section I describes the background of discussion in the Statistical Commission on development of a monitoring programme within the context of human development concerns, ongoing work on social statistics and indicators and existing technical co-operation efforts. Section II reviews in more detail the subject-matter content that the monitoring programme is now addressing, in terms of the specific mandates and objectives adopted by a number of intergovernmental bodies, and describes the operational plans and activities developed thus far, including pilot studies. Section III considers technical issues that need to be addressed in order for the monitoring initiative to meet its objectives of providing reliable, timely and cost-effective social data bases at national and international levels in the fields concerned. Section IV presents brief conclusions, and section V presents points for discussion by the Commission.

* E/CN.3/1991/1.

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I. AN INTEGRATED PROGRAMME FOR MONITORING AND COMPILING SOCIAL AND ECONOMIC INDICATORS

1. At its twenty-fifth session, the Statistical Commission discussed social statistics and indicators under its agenda item 8 (b). In its discussion, the Commission was encouraged to note increasing awareness of the need for social statistics and indicators in both developed and developing countries in order to assess socio-economic trends and problems and provide relevant quantitative inputs for policy formulation and programme management. 1/ In addition, the rapid recent proliferation of low-cost computer technology and global telecommunications and rapidly increasing public interest in national and international statistics of all kinds are now being reflected in greater circulation and attention to general statistical compilation and dissemination activities.

2. The Commission expressed strong support for the continuing work of the Statistical Office of the United Nations Secretariat in co-ordinating international work on social statistics and indicators and stressed the need to avoid overlapping or inconsistent methodologies and data collection efforts and to promote international comparability. As more and more national and international policy initiatives called for statistical indicators to monitor status and implementation, it was essential to maintain a strong co-ordinating framework within which series and indicators for a wide range of uses and users could be developed on a cost-effective basis. 2/

3. The Commission noted with interest the priority given by the United Nations Children's Fund (UNICEF) to designing and promoting indicators closely related to specific aspects of human welfare. It noted that such indicators should be based on data collection and compilation programmes, most importantly household surveys, designed to monitor short-term trends and provide results quickly and efficiently. More broadly, the Commission agreed that considerable efforts would be needed to ensure the collection of data and compilation of indicators needed for monitoring human aspects of development in preparation for the fourth United Nations development decade. 3/

4. In concluding its discussion of this agenda item, the Commission recommended that further work in the Statistical Office focus on the development of a co-ordinated United Nations system data base for selected social statistics and indicators of common interest at the national and international levels and agreed that a concerted effort should be made in the United Nations system for the compilation of indicators to assess human factors and social impacts of development in connection with the fourth United Nations development decade. 4/

5. The present document has been prepared in response to that request but is deliberately selective in its focus. It reports on progress in the development of a monitoring programme specifically within the context of human development concerns identified in the programmes and mandates of UNICEF, the United Nations Population Fund (UNFPA) and the World Health Organization (WHO). The monitoring programme will seek to further expand the opportunities for collection, compilation, analysis and filling gaps in key social statistics which are seen to be relevant for assessing progress in reaching social goals, especially in

developing countries. The present document reviews requirements, possibilities and limitations in collecting, compiling and disseminating the indicators called for in these programmes in the developing regions and in filling gaps in the indicators.

6. A major feature of this initiative is that it is being designed from the start within the framework of established arrangements for international co-ordination in statistics. The smooth functioning of these arrangements is a major ongoing concern and objective of the ACC Sub-Committee on Statistical Activities. The initiative is expected to promote the co-ordination of technical co-operation activities. In addition, at the level of international compilation, the established arrangements for co-ordination will also be further strengthened. These arrangements are designed to minimize reporting burden on member States and provide for the sharing of data among all interested and concerning agencies and offices as needed. These arrangements also foster the use of established statistical concepts, definitions and classifications.

7. Within the framework of these arrangements, an effective monitoring programme must ensure:

(a) Appropriate statistical capabilities and programmes at the national level, including data collection, processing, compilation, dissemination and analysis;

(b) Effective review and co-ordination of methods in selecting and defining needed indicators and filling gaps, and development of underlying statistical methodologies to ensure their validity, comparability and timeliness of results;

(c) Effective programme for analysis and dissemination of comparable indicators and supporting documentation at national, regional and international levels;

(d) Effective mobilization and co-ordination of bilateral and multilateral resources for technical co-operation in statistics to support the full range of monitoring activities.

II. THE NEED FOR COMMON SOCIAL STATISTICS AND INDICATORS

8. As the Fourth United Nations Development Decade unfolds, there is increasing consensus about the urgency of ensuring that appropriate statistical programmes are in place and methods available to assess progress in developing countries as they strive to meet their social and human development goals.

9. Two documents before the Commission note a wide range of social issues and objectives which have been articulated in international forums and instruments (E/CN.3/1991/4 and E/CN.3/1991/21). They cover employment, health, the advancement of women, children, agriculture and food, population, poverty, education and culture, elderly, disabled, shelter and settlement, communications, transportation, science and technology, and environment. Illustrative indicators in many of these fields were also noted by the Commission at its last session under its agenda item "patterns of consumption: qualitative aspects of development". 5/

10. Human development goals are increasingly clear in many fields. For example, starting with the World Plan of Action for the Implementation of the Objectives of the International Women's Year 6/ in 1975, statistics and indicators for monitoring the status and advancement of women have been developed and compiled. These have steadily been expanded and developed in national and international publications and data bases to cover a greater range and complexity of issues. The United Nations Women's Indicators and Statistics Data base (Wistat) now provides the basis for monitoring implementation of the Nairobi Forward-looking Strategies for the Advancement of Women. 7/ A general compilation of statistics and indicators on women was issued in 1988 8/ and the Statistical Office of the United Nations Secretariat reports relevant indicators for monitoring implementation of the Strategies to the Commission on the Status of Women every two years. 9/ A statistical and analytical report on trends in the situation of women from 1970 to 1990 has also been prepared by the Statistical Office and Division for the Advancement of Women of the United Nations Secretariat, with UNICEF, UNFPA and UNIFEM, to be issued in mid-1991. 10/

11. Population and related objectives are contained in the World Population Plan of Action, adopted in Bucharest in 1974, affirmed and expanded at the International Conference on Population in Mexico City in 1984, and further developed in the Amsterdam Declaration on a Better Life for Future Generations, adopted by the International Forum on Population in the Twenty-First Century, held at Amsterdam in 1989. 11/ Population goals and objectives in the Amsterdam Declaration match and complement the goals of UNICEF, WHO, UNDP and UNESCO. These goals and objectives relate, inter alia, to average number of births born per woman, universal knowledge of contraception by couples, availability and use of contraceptives including proportion of women and men using reliable methods of family planning, rates of very early marriage and teen-age pregnancy, infant and maternal mortality rates, life expectancy for women and men, geographical distribution of the population within national territories in balance with the proper use of resources, and status and role of women in the society as well as education of women. Among critical basic activities called for to plan for attainment of these goals are increased efforts to collect, analyse, disseminate and use data in population policy and programme planning and an increase in the organization of surveys and multidisciplinary research on internal and international migration to help formulate adequate policies in this area.

12. Education goals and targets are proposed in the Framework for Action adopted by the World Conference on Education for All: Meeting Basic Learning Needs in 1990. 12/ These refer to early childhood care and development, universal access to and completion of primary education, learning achievement, adult literacy, provision of basic education and training in other essential skills.

13. In the World Declaration on the Survival, Protection and Development of Children, adopted at the World Summit for Children, held on 29 and 30 September 1990, seven major goals for child survival, development and protection were adopted as well as supporting/sectoral goals relating to women's health and education, nutrition, child health, water and sanitation, basic education and children in difficult circumstances. 13/

14. The goals were formulated through extensive consultation in various international forums attended by virtually all Governments, and relevant United Nations agencies including WHO, UNICEF, UNFPA, UNESCO, UNDP, the World Bank and many non-governmental organizations. The goals are recommended for implementation by all countries where they are applicable, with appropriate adaptation to the specific situation of each country in terms of phasing, standards, priorities and availability of resources, with respect for cultural, religious and social traditions. It is expected that additional goals which are particularly relevant to a country's specific situation would be added in its national plan of action.

15. The mandate for assessing the achievement of the aforementioned goals is equally strong. The World Declaration and the Plan of Action for implementing it 14/ recommended action at the national and international levels. At the national level, "each country should establish appropriate mechanisms for the regular and timely collection, analysis and publication of data required to monitor relevant social indicators relating to the well-being of children - such as neonatal, infant and under-5 mortality rates, maternal mortality and fertility rates, nutritional levels, immunization coverage, morbidity rates of diseases of public health importance, school enrolment and achievement and literacy rates - which record the progress being made towards the goals set forth in this Plan of Action and corresponding national plans of action. Statistics should be disaggregated by gender to ensure that any inequitable impact of programmes on girls and women can be monitored and corrected. It is particularly important that mechanisms be established to alert policy makers quickly to any adverse trends to enable timely corrective action. Indicators of human development should be periodically reviewed by national leaders and decision makers, as is currently done with indicators of economic development." 15/

16. At the international level, "the governing bodies of all concerned agencies are requested to ensure that within their mandates the fullest possible support is given by these agencies for the achievement of these goals" and "the assistance of the United Nations is requested to institute appropriate mechanisms for monitoring the implementation of this Plan of Action, using existing expertise of the relevant United Nations statistical offices, the specialized agencies, UNICEF and other United Nations organs. Furthermore, the Secretary-General of the United Nations is requested to arrange for a mid-decade review, at all appropriate levels, of the progress being made towards implementing the commitments of the Declaration and Plan of Action. 16/

17. Finally, as noted in another paper before the Commission (E/CN.3/1991/4), the goals set out in the International Development Strategy have implications for specific fields of statistics, including responsiveness to social goals, the eradication of poverty and hunger, the environment, population, and the special efforts needed to deal with problems of the least developed countries insofar as determining what adjustments in statistical operations and outputs are required.

18. To commence the development of an operational plan, a working group consisting of representatives of UNICEF, UNFPA and the Statistical Office of the United Nations Secretariat (and more recently, UNDP) has initiated discussions for a statistical programme to help countries develop and establish appropriate

capabilities to monitor the achievement of social goals in the 1990s. The working group has been in the process of developing a strategy to implement the monitoring process, to be undertaken in collaboration with national Governments. The methodology will likely involve a mix of instruments and techniques in the collection of relevant data compilation of national and international data bases, analysis of key indicators and identifying and filling gaps. Household surveys, administrative statistical operations, population census data are all expected to be utilized.

19. An initial concept paper prepared by the Working Group was presented at the twenty-third session of the ACC Sub-Committee on Statistical Activities in June 1989. The Sub-Committee welcomed the document and recognized the need for such efforts but also took note of the reservations and questions raised by the representative of the World Bank concerning various aspects of the data compilation and development activities that were expected to be a part of the programme described. 17/

20. The Sub-Committee welcomed the integrated approach, which makes maximum use of ongoing national and international programmes. It was felt that the programme would provide a framework to bring together the efforts of several organizations concerned with supporting countries in their monitoring of social goals. The Sub-Committee urged the Statistical Office and other interested agencies to further elaborate the details of the proposal taking account of the views of regional commissions, specialized agencies and prospective donors to ensure that the objectives and framework of the effort would be as widely applicable and as cost effective as possible. In this context, the Sub-Committee noted a number of questions needing clarification including further specification of users and user needs, elaboration of the capability building aspect of the proposed initiative, its cost effectiveness and relationship to other ongoing programmes and mechanisms for co-ordination. The present document endeavours to detail further developments on these issues.

21. The Statistical Office of the United Nations Secretariat and Statistical Commission have been actively concerned with development of appropriate statistical methods and indicators for monitoring social concerns for the past two decades. In the field of methodology, the Handbook on Social Indicators was issued in 1989. In the further development of a programme to strengthen monitoring capacity, there are of course a number of important issues, both statistical and programmatic. Programmatic issues include reaching accord on which goals are to be targeted for measurement. It is felt that for purposes of statistical measurement, as distinct from the goals themselves, it may only be feasible to identify a limited, restricted set of indicators for which there is an urgent national policy need, at least in the early stages of the programme; otherwise the statistical effort involved may overwhelm both national and international capacities to cope.

22. A second programmatic issue is determination of which countries are to receive the initial focus of attention. Here, the criteria for selection of countries would likely involve many factors including national priorities for statistical monitoring of goals, active programmes of United Nations agencies in technical co-operation to strengthen statistical infrastructure and capability, etc.

Thirdly, there is the critical issue of how best the United Nations system, in co-operation with other multilateral and bilateral efforts, can support the effort at the country level. Related to this latter issue is a recognized imperative by all concerned both to conserve scarce intellectual and financial resources and to consolidate data collection and production efforts through realistic collaboration among all active agencies, with co-ordination being seen as the key to a successful programme. The numerous statistical issues to be addressed are discussed in section III below.

23. Further steps in the joint Statistical Office/UNICEF/UNFPA/UNDP planning of the programme entail further clarification and elaboration of the social and human goals in order to identify the appropriate indicators for monitoring progress, determining the relevance of existing data bases for compiling indicators, improving measurement instruments and collecting or otherwise compiling requisite new data. In that connection approximately 10 countries will be selected initially, on a pilot basis, and visited during the second and third quarters of 1991 to undergo assessments for determining the optimum methodology and strategy to be used for gathering the necessary data to produce indicators. The statistics divisions of regional commissions have been actively engaged in the process of identifying countries for pilot studies; thus far the countries of Algeria, Bangladesh, Ecuador, Ethiopia, Fiji, Gambia, Guatemala, Honduras, Kenya, Mali, Nigeria, Philippines, Sri Lanka, Thailand, Uruguay and Viet Nam are among those which have been suggested, although no final selection has yet been made.

24. One purpose of the pilot efforts is mainly methodological - to ascertain in a selectively chosen set of countries the range of problems, including availability and quality of each targeted indicator, nature and extent of existing gaps, and determination of methodologies for closing such gaps, all in the context of strengthening national capacity to monitor progress towards social goals. Drawing on the methodological results, another output of the pilot efforts will be a more refined and comprehensive plan for full-scale operations, including specifications for the parameters of project documents for "participating" countries to receive technical assistance. Thus, these pilot studies will also help to answer more fully issues related to the overall resources needed for the effort at the national, regional and international levels. Eventually it is thought that 60 or more countries will be targeted for special assistance by the agencies of the United Nations system, and bilateral donors to monitor progress towards social goals during the decade.

III. STATISTICAL AND MEASUREMENT ISSUES

25. Statisticians the world over face the major challenge of measuring progress towards the achievement of social and human development goals. The measurement challenge confronts both the national statistician who must assemble the basic building blocks of statistical assessment and the international statistician whose aim is to impose standards of statistical comparability in the process in order to promote global acceptance and understanding of the measures or indicators utilized.

26. Goals which have already been adopted by countries as well as additional ones which are being considered for adoption are numerous and varied. Here we discuss some of the central statistical issues that surround the problem of measuring progress towards social goals. There are a host of important issues, so the treatment in this document must be brief and selective. Statistical issues include data availability and quality; balancing practical concerns of differential monitoring capability across countries versus accepting cruder proxies; whether to identify a set of social goals as a core group for measurement purposes; determining appropriate indicators to match the goals; establishing statistical properties as well as ideal and practical criteria for gathering the raw data and producing the indicators; reaching consensus on standards of acceptable measurement with respect to methodological rigor, coverage, and sample size; promoting improved cost effectiveness of data collection and trend measurement. Some of these issues are taken up in the following paragraphs under the general headings of goals and indicators, measurement, sources of data, and data processing, analysis and interpretation.

A. Goals and indicators

27. To place the theme of this document in context, it is useful to note a list of the goals which have so far been identified and adopted at the World Summit on Children. The list is reproduced in the annex. Perusal of the list of goals immediately reveals several implications for statisticians. Most apparent, perhaps, is that the expressed goals run the gamut of specificity for purposes of attempting to measure them. While many of the goals are grounded clearly in quantifiable terms, others are much too vague to measure meaningfully. A second obvious implication is that point estimates of both levels and change as well as trend statistics will play important roles in monitoring for the 1990s. The distinction is critical since point estimates require considerably more resources than trend measurements.

28. A third implication for statisticians, not so apparent as the two mentioned, is that many of the stated goals require conceptualization of appropriate measures and indicators to assess achievement or progress. Thus, an examination of the illustrative list of statistical series and classifications prepared for the project on patterns of consumption (see annex) and the goals adopted at the World Summit for Children (see annex) indicates the kind of effort needed to transform goals into specific indicators and statistical series. Fortunately, a great deal of work has already been done on this key issue by the research community and by various United Nations agencies.

29. The United Nations Handbook on Social Indicators, published in 1989, provides such guidance within a general framework for the development of indicators. Technical documentation on statistics on women, disabled persons and other population groups, and on methods of population and housing censuses, household surveys, and civil registration and vital statistical systems developed by the Statistical Office of the United Nations Secretariat over the past 10-12 years also provides extensive technical guidance for basic data collection and for selection of indicators.

30. As a result of these efforts, there exists well developed technical documentation for the development of indicators and statistical measures pertaining to most of the social goals targeted for the 1990s, and therefore this matter is not seen as a significant statistical issue per se. A number of the indicators which have already been covered by the methodological work of the Statistical Office of the United Nations Secretariat are of relevance to the joint United Nations programme to monitor achievement of social goals. However, there remain some goals for which the lack of specificity may preclude operationalizing a measurement indicator that might suitably match the goal.

31. A fourth implication is that since many of the goals are seeking to achieve equity of one kind or another, the task of measurement must deal with the usual problems, particularly inadequate sample sizes, of producing appropriate levels of disaggregation for vulnerable subgroups.

32. Finally, there is not always a one-to-one correspondence between a particular targeted social goal and the indicator for measuring it. Indeed many goals have multiple indicators that are relevant. An important issue for countries with scarce statistical resources or underdeveloped measurement capability will be the question of whether to attempt to provide some very limited and poorer quality information for all indicators on all goals, or by contrast whether to settle upon a core group of indicators for measurement purposes that can be more realistically attempted and with greater accuracy. The role of statistical co-ordination at the international level as well as nationally is seen as a critical element in helping to shape a viable programme for social monitoring generally and providing guidance for efficiently tapping limited resources more specifically.

B. Measurement

33. One of the central issues concerns the basic strategy to be used in measuring progress towards the achievement of social goals. Ideally, the data required for such purposes would be provided by statistical series constructed from multiple sources including administrative record systems, population and housing censuses and continuing household survey programmes. Although considerable progress has been made in the development of appropriate statistical series in recent years, many countries continue to have important gaps in the data needed to reliably monitor progress in achieving even a core list of basic social goals.

34. In countries where statistical systems and programmes are not yet fully developed, a choice will have to be made whether to attempt to upgrade the existing systems or adopt a more limited-scope monitoring strategy. The former approach would entail the systematic assessment and, as necessary, enhancement of the existing administrative reporting systems (for example, national civil registration and vital statistics systems), censuses and survey programmes, while the latter approach would entail the implementation of data collection efforts focused on short-term needs to compile the requisite data to construct specific indicators. One form of the latter strategy might be to concentrate resources on pre- and post-measurement of relevant indicators in relation to specific time reference points, that is, measuring the degree of change between a specified starting and ending point, between the years 1990 and 2000 for example.

35. A second set of issues of measurement concerns the level of methodological rigor required for producing useful social indicators. Several sub-issues stand out here. The first of these is the issue of coverage. Given the focus of national coverage and equity in many of the stated goals, the importance of minority population subgroups and those residing in remote areas is self-evident. Unfortunately, such groups tend to be disproportionately missed in both facility- and population-based data collection undertakings. Moreover, within individual countries there is a continually growing demand to monitor social progress for geographic sub-regions, provinces or their equivalent, and urban and rural areas separately. Thus, special efforts will be required to ensure that key population subgroups and subnational geographic areas are adequately covered in the development of statistical programmes to monitor social goals.

36. A second, and related, sub-issue concerns appropriate sample sizes for social indicators that are derived from data collected in sample surveys. The experiences of the 1970s and 1980s have demonstrated that quite reliable estimates of selected health and demographic parameters may be obtained with sample sizes of a few thousand households (3,000-6,000), particularly for national level data. Notable among these efforts is the World Fertility Survey (WFS), the Demographic Health Survey (DHS), the Expanded Programme on Immunization Coverage Surveys (EPI), and more recently, the current surveys being carried out in connection with the Pan-Arab Project for Child Development (PAPCHILD). While all these survey efforts have greatly enhanced the feasibility of utilizing sample surveys on a regular basis as a means of monitoring programme achievements, as well as social progress more generally, there are nevertheless, important limitations which should be borne in mind. Most notable among these is the matter of sample size when subnational disaggregations are required with acceptable levels of reliability. For example, regional estimates of the sex-specific infant mortality rate are simply not reliable when only a few thousand sample cases are available at the national level, which is the prevailing situation for most multi-purpose surveys being used today.

37. Another sub-issue concerns the use of indirect methods for measuring selected indicators. The use of indirect methods for the estimation of demographic parameters is now widespread and many developing countries now use such methods as official estimates in place of vital registration data, which are known to be seriously defective. While the use of such methods has provided Governments with much more accurate demographic data than they otherwise would have had available, several cautions relating to the utilization of these methods, particularly in the context of monitoring, are in order. First, it should be recognized that although data collection protocols underlying many of the methods have been simplified to the point that they are widely applicable, the analysis and interpretation of the resulting data remains somewhat demanding in terms of the analytic skills required. This is particularly true with regard to the measurement of short-term trends in fertility and mortality. In single round surveys, for example, measurement of trends is dependent upon sets of assumptions regarding the nature and magnitude of reporting errors in the data. It is also dependent on the assumption that recent demographic experience of the country under study is still valid. Violation of these underlying assumptions can lead to findings which can be seriously misleading when some of the indirect methods are employed. In multi-round surveys, on the other hand, care must be taken to ensure that

population coverage and survey interview protocols are held relatively constant in successive survey rounds so that changes in statistical methodology do not conceal "real" changes or create apparent ones.

38. At the broad policy level, the substitutability of indirect estimation procedures for improvements in civil registration systems as the basis for demographic indicators is a question which needs to be addressed in many countries, at least over the long term. The use of such methods provides needed information for policy development and programme monitoring over the short- to medium-term, but this should not preclude efforts to resolve the administrative and operational problems which lead to defective registration systems in the first place. Ultimately, well-developed civil registration systems will provide a much sounder basis for local level programme planning and monitoring than do the occasional surveys which provide the data for indirect estimates of demographic parameters (see document E/CN.3/1991/19, which is also before the Commission).

39. A third set of issues under the heading of measurement methods concerns attempts to improve the cost effectiveness of data collection efforts. Given the scarce resources available, a general thrust over the past decade or so has involved the search for simpler, less costly and reasonably accurate (i.e., "quick and clean") measurement methodologies. Examples include the increasingly common use of standard cluster survey protocols such as the WHO's EPI and CDD (control of diarrhoeal disease) and nutritional assessment survey protocols, as well as the so-called rapid assessment techniques, alternative study designs (case-control studies in lieu of population-based surveys, for example), and non-traditional sampling techniques such as the use of non-probability methods in the second stage and lot quality assurance sampling.

40. While the experience to date with these approaches has been encouraging, some of the methods and techniques have not yet received sufficient methodological scrutiny in actual field applications for their limitations to be well understood and documented. Questions have been raised, for example, regarding the potential for bias in cluster surveys which use non-probability sampling methods for selecting ultimate sampling units within sample clusters.

41. It is useful to develop some desired or ideal properties of indicators for social monitoring purposes. WHO has enumerated four ideal qualities of health sector indicators which are generalizable to other sectors and, as such, provide a good starting point in the present discussion. These are as follows:

(a) Validity - the indicators should measure what they purport to measure (as noted and discussed in the section of this paper dealing with conceptualization of indicators);

(b) Objectivity - the indicator should be the same regardless of the respondents/sources queried in order to obtain the data underlying the indicator;

(c) Sensitivity - the indicators should be sensitive to changes in the situation being monitored;

(d) Specificity - they should reflect changes only in the situation being monitored (that is, the indicator should not be distorted by changes in extraneous phenomena).

42. In addition to the above, it might be prudent, given the general trend towards increased use of sample surveys for programme and situational monitoring purposes, to include among the desirable properties the use of probability sampling and the concept of reliability. Probability sampling is seen as a crucial statistical property for which to strive, inasmuch as its absence renders the possibility of calculating the sampling precision of an estimate (and hence indicator) impossible. With respect to reliability, the indicators should be measured with a sufficient degree of precision that it is possible to detect actual changes in the indicators at a chosen level of precision.

43. Finally, a note on the property of unbiasedness is also appropriate in the context of indicators that are derived from raw data emerging from sample surveys or censuses. Though statisticians would generally aim to minimize bias in survey undertakings, unbiased estimates are not essential in the context of monitoring trends, provided that information on the direction and magnitude of the bias exists. Rather, what is critical is that the nature of the measurement bias must remain more or less constant over time. Though the estimated level of a particular characteristic might be subject to dispute, the trend may nevertheless be measured with an acceptable level of accuracy so long as standardized statistical procedures and instruments are used at each round of measurement.

C. Sources of data

44. A number of relevant issues arise concerning appropriate sources of data for monitoring social progress. First is the need for data sources to be indicator specific. Since certain data collection strategies have comparative advantages vis-à-vis other strategies for particular types of data and/or indicators, data collection strategies should be rationalized in terms of relative efficiencies. For example, the level of coverage of health programmes tends to be more accurately measured through population-based sample surveys, as opposed to facility-based record systems. This is particularly true where the population coverage of the facility catchment area is not well known and/or where there are multiple service providers operating within the same geographic area. By contrast, many forms of morbidity cannot be measured accurately on the basis of interview surveys, since lay interviewers cannot be generally trained to diagnose morbidities.

45. A corollary to the point above is that all available and appropriate sources of data and/or data collection strategies should be utilized, bearing in mind the relevance and completeness of each. Given that additional data collection will be necessary to fill gaps, data collection options should be carefully assessed in terms of adequacy and cost-efficiency. As indicated above, these would include population and housing censuses and administrative reporting systems, particularly national civil registration systems, as well as household sample surveys. Population censuses, while important in providing important calibrating measurements for many indicators and a sampling frame for sample surveys, are not

able to provide data for short-term trends in a timely manner. National civil registration systems are, on the other hand, ideally suited to such a task. However, in a number of developing countries, the vital statistics produced by the civil registration system are not sufficiently complete or reliable to be used for monitoring purposes. As a result, considerable reliance will have to be placed on sample surveys. In these circumstances particular account needs to be taken of other international initiatives promoting related data collection activities. These include the National Household Survey Capability Programme (NHSCP), the Demographic and Health Survey programme (DHS) sponsored by USAID, Pan-Arab Project for Child Development (PAPCHILD) executed by the League of Arab States, the Inter-Agency Food and Nutritional Surveillance Programme (IFNS) sponsored by UNICEF, FAO and WHO, and the Living Standards Measurement Study (LSMS) and Social Dimensions of Adjustment (SDA) project executed by the World Bank.

46. Within this context, country-specific implementation strategies will no doubt differ on the basis of such factors as the level of development of the national statistical system, the resources available for the short-run improvement of the existing system, experience in the various data collection strategies and methodologies for constructing social indicators, the country situation and national priorities on the social development agenda, social programme implementation strategies, etc.

D. Data processing, analysis and interpretation

47. With regard to data processing concerns, a few points should be noted. In the past the general complexity and time involved to process raw data from surveys and censuses to provide basic tabulations, not to mention the production of sophisticated measures such as survival probabilities at selected ages, often meant that years would pass between the completion of field work and the release of results. With the proliferation of microcomputer technology and specialized computer software in virtually all countries over the past decade, however, such issues have come to play a much less prominent role in the production of timely and accurate social indicators. Outstanding achievements in software have virtually revolutionized both processing and analysis of data. Notable software advances include MORTPACK for mortality estimation, developed by the Population Division of the United Nations Secretariat; EASWESPOP for fertility analysis, developed by the East-West Population Institute; IMPS (Integrated Microcomputer Processing System), developed by the United States Bureau of the Census; PC-CARP for standard error and regression estimation, developed by Iowa State University; CLUSTERS for standard error estimation, developed for the World Fertility Survey; ISSA (Integrated System for Survey Analysis), developed by the Institute for Resource Development; and U-SP for survey processing, developed by the University of Kent.

48. Although hardware and software selection will continue to play a key role in determining overall processing capacity and efficiency, microcomputer and software technology have developed to a point where data processing considerations are no longer seen as the prime determinants of the timeliness and quality of data in most countries. In these countries, rational and effective management of existing data processing resources and incorporation of new technical developments and resources

into ongoing operations are likely to constitute the major data processing issues to be addressed in the 1990s.

49. In focusing on analysis and interpretation of social indicators we must distinguish between substantive and statistical levels. Substantive interpretation of data on progress towards social goals is tied very closely to the operationalized concept of the indicator vis-à-vis the goal itself. So, inasmuch as these relationships bear a recognized and rational correspondence, the interpretation will be substantively acceptable and methodologically well-grounded.

50. On the other hand, statistical interpretation and analysis will likely present issues that cannot be ignored. Among these issues are recognizing the existence of sampling and nonsampling errors in raw data and resultant indicators, and actually taking account of such errors in analysis. Moreover, there is renewed analytical interest in development and use of summary or composite indexes such as UNDP's human development index (HDI) and a proposed social progress index in Latin America. Such indexes raise a number of technical, conceptual and analytical issues upon which there is no consensus. For example, a composite index number requires the component factors or indicators to be appropriately weighted. How to arrive at a system of weighting that would be generally accepted for international use remains problematic from a substantive and statistical perspective. These issues were considered at length in the United Nations study published in 1977, The Feasibility of Welfare-oriented Measures to Supplement the National Accounts and Balances: A Technical Report. This study concluded, "In the end, however, it must be recognized that the concept of level of living is by its nature intensely complex and incapable of reduction to simple quantitative terms. In this lies the importance, for any evaluation of social and economic priorities in different parts of the world, of research into and publicity for the different patterns or profiles of living and the various ways in which scarce resources (not only monetary resources) are used for alternative ends" (para. 200). 18/ The question of a composite measure closely linked to national accounts was also considered by the Statistical Commission in 1976 at the request of the Committee for Development Planning (paras. 22-29 of the report of the Commission's nineteenth session). 19/ The Commission agreed that it would be inappropriate to try to develop international standards for an alternative aggregate to GDP to measure welfare and that this was a more suitable area for research than for statistical compilation. A variety of statistics were needed to measure welfare. 20/ Nevertheless, interest among users has continued to be strong and work on composite indexes is continuing. Accordingly, statisticians and statistical services face a choice between contributing their expertise to development work in this field in the hope that better and more valid indexes will result or remaining both critical and aloof in the hope that their noninvolvement will in some way reduce the visibility or authority of the indexes produced.

51. Turning to the matter of sampling error, statisticians have rather painstakingly encouraged users of data based on sample surveys to take account of sampling error in interpreting results, but the record has been mixed. Many users seem to be content with only a general acknowledgment that their data are subject to various limitations. The relationship between sampling errors and estimates, as well as the related confidence intervals, remains a difficult concept to convey to

non-statisticians, which may explain why not much emphasis is placed on these matters when data are presented.

52. In addition to the matter of calculating sampling errors to help evaluate the quality of survey-based estimates (and resulting indicators), an important issue in the presentation of results concerns taking account of the standard errors in drawing conclusions, particularly with respect to estimated changes. This concern is especially critical for purposes of monitoring achievement of social goals, since estimates of the change between 1990 and 2000 for various targeted goals will likely be the most utilized model for assessing progress.

53. The pervasive problem of nonsampling error in surveys and censuses must also be mentioned. With the concept of "total survey error" gaining increasing usage, it is generally recognized that of its two dichotomous components, nonsampling error plays a much more prominent role in the overall quality of data than sampling error whenever samples are sufficiently large, which is generally the case in the kind of large-scale, multipurpose surveys that are likely to be used to produce much of the data needed for social monitoring. The sources of nonsampling error are so numerous, including nonresponse, interviewer errors, recall errors, respondent conditioning, data entry errors, etc., that it remains extremely difficult for statisticians to obtain even an approximate measure of the totality of nonsampling error present in any given survey or census. Often the best that can be done, given extremely limited resources for independent evaluation studies, is to indicate to users what types of nonsampling errors may be present in the data, in lieu of carrying out systematic research to obtain actual measures of the magnitudes of such errors.

54. As mentioned above, one way of minimizing the effect of nonsampling error for purposes of social monitoring is to utilize the same methodology (in terms of survey instruments and operational procedures) when measuring change, inasmuch as biases contributed by various forms of nonsampling error may have minimal effect on estimated change, as opposed to level.

IV. CONCLUSIONS

55. Progress towards the achievement of social and human development goals by the year 2000 can only be monitored through the collection and dissemination of valid, reliable and timely statistical information. The measurement effort needed is complex and technically demanding. It will require dedicated efforts on the part of national and international statisticians, extensive investments in human and financial resources, strong and well focused co-ordination, continuing development of statistical infrastructure and innovative techniques for measuring changes and monitoring progress.

V. POINTS FOR DISCUSSION

56. The Commission may wish to:

(a) Comment on appropriate general concepts and strategies for statistically monitoring the achievement of social goals;

(b) Consider the type and extent of programme and co-ordination requirements for statistical collection, compilation and dissemination to provide the statistics and indicators needed for monitoring;

(c) Suggest the main features of a full-scale monitoring programme at the national level to be explored in pilot studies now in the planning stages;

(d) Comment on technical and methodological issues in statistics which need to be addressed to ensure that the social statistics and indicators collected are valid, reliable, timely, widely available and comparable at national and international levels for monitoring purposes; and

(e) Suggest appropriate methods of international co-ordination and programme development to assist countries in this field, bearing in mind the need to concentrate limited resources on a strictly limited number of objectives.

Notes

1/ Official Records of the Economic and Social Council, 1989, Supplement No. 3 (E/1989/21), para. 129.

2/ Ibid., para. 135.

3/ Ibid., para. 138.

4/ Ibid., para. 141 (b) and (c).

5/ See E/CN.3/1989/14, annex.

6/ See Report of the World Conference of the International Women's Year, Mexico City, 19 June-2 July 1975 (United Nations publication, Sales No. E.76.IV.1), chap. II.

7/ See Report of the World Conference to Review and Appraise the Achievements of the United Nations Decade for Women: Equality, Development and Peace, Nairobi, 15-26 July 1985 (United Nations publication, Sales No. E.85.IV.10), chap. I.

8/ Compendium of Statistics and Indicators on the Situation of Women 1986, Series K, No. 5 (United Nations publication, Sales No. E/F.88.XVII.6).

Notes (continued)

9/ See, for example, "Statistics and indicators on women's participation in the economy", in 1989 World Survey on the Role of Women in Development (United Nations publication, Sales No. E.89.IV.2).

10/ The World's Women: 1970-1990, Series K, No. 8 (United Nations publication, in press).

11/ See A/C.2/44/6.

12/ See Final Report of the World Conference on Education for All: Meeting Basic Learning Needs, Jomtien, Thailand, 5-9 March 1990, (New York, UNICEF, 1990), appendix 2.

13/ See World Declaration on the Survival, Protection and Development of Children (New York, UNICEF, 1990).

14/ Plan of Action for Implementing the World Declaration on the Survival, Protection and Development of Children in the 1990s (New York, UNICEF, 1990).

15/ Plan of Action ..., para. 34 (v).

16/ Plan of Action ..., para. 35.

17/ ACC/1989/PG/6, paras. 57-62.

18/ Series F, No. 22 (United Nations publication, Sales No. E.77.XVII.12), para. 200.

19/ Official Records of the Economic and Social Council: Sixty-second Session, Supplement No. 2 (E/5910), paras. 22-29.

20/ Ibid., para. 23.

Annex

MAJOR GOALS FOR CHILDREN AND DEVELOPMENT IN THE 1990s*

I. MAJOR GOALS FOR CHILD SURVIVAL, DEVELOPMENT AND PROTECTION

(a) Between 1990 and the year 2000, reduction of infant and under-5 child mortality rate in all countries by one third or to 50 and 70 per 1,000 live births respectively, whichever is less;

(b) Between 1990 and the year 2000, reduction of maternal mortality rate by half;

(c) Between 1990 and the year 2000, reduction of severe and moderate malnutrition among under-5 children by half;

(d) Universal access to safe drinking water and to sanitary means of excreta disposal;

(e) By the year 2000 universal access to basic education and completion of primary education by at least 80 per cent of primary school-age children;

(f) Reduction of the adult illiteracy rate (the appropriate age group to be determined in each country) to at least half its 1990 level with emphasis on female literacy;

(g) Improved protection of children in especially difficult circumstances.

II. SUPPORTING/SECTORAL GOALS

A. Women's health and education

(i) Special attention to the health and nutrition of the female child and to pregnant and lactating women;

(ii) Access by all couples to information and services to prevent pregnancies which are too early, too closely spaced, too late or too many;

(iii) Access by all pregnant women to prenatal care, trained attendants during child birth and referral facilities for high risk pregnancies and obstetric emergencies;

(iv) Universal access to primary education with special emphasis for girls and accelerated literacy programmes for women.

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* From the Plan of Action for Implementing the World Declaration on the Survival, Protection and Develoment of Children.

B. Nutrition

(i) Reduction in severe, as well as moderate malnutrition among under-5 children by half of 1990 levels;

(ii) Reduction of the rate of low birth weight (2.5 kg or less) to less than 10 per cent;

(iii) Reduction of iron deficiency anemia in women by one-third of 1990 levels;

(iv) Virtual elimination of iodine deficiency disorders;

(v) Virtual elimination of vitamin A deficiency and its consequences, including blindness;

(vi) Empowerment of all women to exclusively breast-feed their children for four to six months and to continue breast-feeding with complementary food, well into the second year;

(vii) Growth promotion and its regular monitoring to be institutionalized in all countries by the end of the 1990s;

(viii) Dissemination of knowledge and supporting services to increase food production to ensure household food security.

C. Child health

(i) Global eradication of poliomyelitis by the year 2000;

(ii) Elimination of neonatal tetanus by 1995;

(iii) Reduction by 95 per cent in measles deaths and reduction by 90 per cent of measles cases compared to pre-immunization levels by 1995, as a major step to the global eradication of measles in the longer run;

(iv) Maintenance of a high level of immunization coverage (at least 90 per cent of children under one year of age by the year 2000) against diphtheria, pertussis, tetanus, measles, poliomyelitis, tuberculosis and against tetanus for women of child-bearing age;

(v) Reduction by 50 per cent in the deaths due to diarrhoea in children under the age of five years; and 25 per cent reduction in the diarrhoea incidence rate;

(vi) Reduction by one third in the deaths due to acute respiratory infections in children under five years.

D. Water and sanitation

(i) Universal access to safe drinking water;

(ii) Universal access to sanitary means of excreta disposal;

(iii) Elimination of guinea-worm disease (dracunculiasis) by the year 2000.

E. Basic education

(i) Expansion of early childhood development activities including appropriate low-cost family- and community-based interventions;

(ii) Universal access to basic education, and achievement of primary education by at least 80 per cent of primary school-age children through formal schooling or non-formal education of comparable learning standard, with emphasis on reducing the current disparities between boys and girls;

(iii) Reduction of the adult illiteracy rate (the appropriate age group to be determined in each country) to at least half its 1990 level, with emphasis on female literacy;

(iv) Increased acquisition by individuals and families of the knowledge, skills and values required for better living, made available through all educational channels, including the mass media, other forms of modern and traditional communication, and social action, with effectiveness measured in terms of behavioral change.

F. Children in difficult circumstances

Provide improved protection of children in especially difficult circumstances and tackle the root causes leading to such situations.